2:Gough E-4, 5 (1947-1949)1961 A W11 Kerala A W11
Central Kerala Nayar

nearer to the sea (Innes, 1908: 270). The temperature varies from 70° to 90° and humidity is always high. Unlike most of the great kingdoms of India, Kerala had no single great river and no extensive, centrally organized irrigation system. Instead, her cultivated crops and lush vegetation depended on the heavy rainfall and numerous small rivers and streams by means of which small-scale irrigation was easily possible to groups of families.

Further, the heavy rainfall, seasonal floods, and hilly terrain made communications difficult until modern times. Before the partial conquest of Kerala by Mysoreans from the northeast in 1766, there were no roads, wheeled vehicles, or pack animals. The kings maintained small cavalry forces only in the coast towns, traveled in palanquins, and employed runners to carry messages to their vassal chiefs. Goods were dragged downstream by elephants, transported in boats, or carried on the backs of men. Armies moved slowly; local nobles sometimes rebelled against their rulers but warfare was abandoned in the heavy southwest monsoon season from May to September. The difficulty of communications and the lack of a centrally organized irrigation system may have been connected with the fact that Kerala had no regular land tax until the 1730's (*ibid.*: 308). Instead, the revenues of her rulers came from tribute in kind supplied by subordinate nobles, and from taxes levied upon overseas trade (Logan, 1951, II: ccxviii; Innes, 1908: 307–308).

In spite of the overseas trade, most of Kerala's villages were traditionally self-sufficient for the basic necessities of life. Quantities of manufactured goods were brought to Kerala's ports from other parts of India for shipment to the Middle East, but indigenous crafts such as weaving, metalwork, pottery, and basketry remained simple and served local needs. Kerala thus had no large urban castes of craftsmen and no indigenous merchant castes, but only immigrant communities of Syrian Christian, Jewish, Muslim, and, later, European merchants and Hindu merchants from other kingdoms of India, all concentrated in the coastal towns. The limited nature of trade and crafts and the comparative self-sufficiency of village life also help to account for the relatively decentralized political structure.

History

Little is known of Kerala until the first century A.D. It then formed part of the kingdom of Chera, whose capital was probably east of the Ghats at Karur on the Kaveri River in the modern Trichinopoly district. Chera, like its companion South Indian kingdoms, Chola and

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1.9 The distance within which these rivers descend to the sea level being very short, there are generally a large number of steep falls or a series of cascades in their courses. These provide a rich potential for generation of hydro-electric power, which can be generated at a low cost (1.7 nP per kWh on an average). This low cost power potential is an important asset of Kerala from the point of view of the future programmes of industrialization.

1.10 Some other implications of topographical features are not so obvious. For example, the lakes, the lagoons and the backwaters fringed with coconut palms, no doubt, impart to Kerala its characteristic scenic beauty and provide one of the chief tourist attractions. Their importance, however, goes much beyond the purely aesthetic aspect. In fact, the backwaters—especially in the Travancore-Cochin region —are indirectly responsible for providing the means of livelihood to a vast section of the population. Coir spinning, the chief industry of Kerala, is located in this State primarily because of the natural retting facilities provided by the backwaters. The availability of these facilities is unique in the case of Kerala. In almost all other coconut-growing areas of India, the coconut husks go waste because of the absence of natural retting facilities. Since coir industry provides an occupation to 4 to 5 lakh persons (about 10% of the total working force and 40% of industrial working force), one can well imagine what the unemployment situation in Kerala would have been in the absence of the backwater facilities. The backwaters have also facilitated the development of a wide network of inland waterways all along the coastline. Apart from employing a large number of persons in towing or rowing the boats, the inland waterways provide inexpensive modes of transporting the agricultural produce and light industrial goods manufactured in the coastal area.

1.11 Up till now only some of the favourable consequences of physical features have been pointed out. The sloping terrain and preponderance of backwaters in the coastal area also possess a negative aspect. The heavy downpour is gradually leaching off the mineral content of the soils, thus rendering them generally poor in their fertility status. One of its ultimate consequences is the fact that livestock feed available in Kerala is deficient in mineral content and this in turn reduces the yield of milk of the livestock. The heavy precipitation of rain also creates a serious flood control problem in Kerala.

1.12 The backwaters raise other problems as well. During the dry summer months saline water from these flows into the lower reaches of the rivers, many of which fall into the backwaters. This has an adverse effect on cultivation and the supply of drinking water in the coastal areas. Coastal areas are, therefore, beset with the problem of salinity control. The chain of consequences does not stop here. Recently implementation of one of the important salinity control measures in Kerala, viz., the Thanneermukkom bund across the Vembanad lake has created a new problem in its wake. The accretion of limeshell deposits, an important raw material found in the lake, depends on the high salinity of the lake water. Since, after putting up of the barrage salinity of water will get reduced, it will have adverse repercussions on the long run supply position of the limeshells. This, in turn, jeopardizes the long run prospects of the cement industry in the State which is based on the limeshells.

[text continues on p. 6]

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the uneven nature of the terrains. Along the coastal strip, inland waterways are the ideal means of transporting lighter commodities.

1.49 It is well known that in standards of literacy Kerala is ahead of all the other States of India. The literate population is 46.2 per cent as compared with 23.7 per cent for the whole of India (1961 Census). Kerala has a very long tradition in imparting education on organized lines. Initiative in the spread of education was first taken by the Christian Missionaries during the middle of the last century. The State followed up by offering grant of aid to the missionary schools, and opening of new Government schools.

1.50 While the State is in the forefront of India in general education, it is hardly so in the sphere of technical education. From the point of view of future industrialization programmes, the emphasis in future will have to undergo a shift in position. During the Second Plan period considerable progress has been made in opening a number of polytechnics and other technical institutions. Their impact, however, will only be felt during the Third Plan period when qualified technicians start coming out from these institutes.

1.51 The State is also fairly high up in the standard of its health services although in some of the indices of health service development it lags behind all-India standards. On the other hand the *ayurvedic* system has had a long established tradition in the State and is popular among the public. Some of the indices showing the relative state of development of medical facilities are given below:

	India (Persons)	*Kerala* (Persons)
One doctor for	7,000	5,200
One nurse for	19,000	16,700
One hospital bed for	1,400	3,125

Regional Disparities

1.52 Although the infra-structure as a whole is well developed in the State, it is not uniformly so all over the State. Economically, Malabar, which was previously a part of the Madras State, is on a distinctly different plane from the Travancore-Cochin area. Unlike the erstwhile States of Travancore and Cochin, Malabar did not receive the benefit of State patronage. At present Malabar is backward compared to Travancore-Cochin in terms of almost all the indicators of economic development. Both the transport and education system are not as well developed in Malabar as in Travancore-Cochin.[1] It lags behind industrially as well. Unemployment also seems to be higher in Malabar. This is corroborated by the much lower participation rate in the case of Malabar.[2] Under these circumstances, economic policy would undoubtedly have to pay due attention to the need for levelling up such wide disparities.

[1] Chapters on "Industries—Structure and Growth" and "Transport". (Nos. 9 and 8)
[2] Chapter on Manpower. (No. 11)

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in the early years has been due to the fact that either the sanctions from the Government were received late or the staff was not appointed in time. The shortfall in performance during the Second Plan period emphasises the need for devoting greater attention to forest development programmes during the Third Plan period.

FUTURE DEVELOPMENT OF FORESTRY

4.29 Forests are an important source of raw material for industry in Kerala. Their importance is brought out by the fact that forest-based industries are more predominant in the economy of Kerala compared to the position they occupy in the industrial structure of India as a whole.[1]

4.30 In view of the important position occupied by the forest-based industries in Kerala, the policy towards forest resources should aim at long-run enhancement of the forest potential so that an increasing surplus of raw materials could be made available to industry. Forest development policy in the State should, therefore, be guided by the following objectives :

(*i*) Utilization of resources as yet untapped.
(*ii*) Raising the long-run forest potential through:
  (*a*) acceleration of the process of conversion of poor deciduous forests into valuable teak and softwood plantations.
  (*b*) extensive reclamation of grasslands on the basis of experimental Eucalyptus plantings carried out during the Second Plan.
(*iii*) Incorporation of technical improvements in the methods of logging, etc., so that wastage could be reduced. These aspects are discussed in the following paragraphs.

Existing Potential

4.31 In Kerala, the existing potential of forest resources is being exploited comparatively much better than in many other States of India. Due to easy accessibility provided by the numerous rivers and roads, many of which serve the forests, extraction has been very much facilitated. The importance of the role of river transport in exploitation of forest wealth is shown by the fact that two big centres of forest produce, viz., Kallai and Chalakudy are both located by the side of rivers. Although the general picture as regards exploitation of existing resources is quite bright, some pockets still remain untapped. These are discussed below :

4.32 (*i*) *Bamboo Resources* : In spite of a large bamboo potential in the State, this source remains completely unutilized for industrial purposes. Out of the total available supply, about two-thirds is utilized for local requirements of construction, etc. The position regarding the quantum of surplus available is as follows.

[1] See Chapter on Industries.

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Transport

5.46 The entire coastline of Kerala is well served by the railways. From Trivandrum to Kayankulam and from Tirur to Manjeswar, a total distance of 220 miles, the tracks are only two to three miles from the sea coast. In addition, there is a motorable road running almost all along the entire coastline. Head loads, bicycles, motor lorries, all these modes are employed for the transportation of fish to the markets depending on the distance of the landing sites from the consuming centres.

5.47 The State Fisheries Department operates four insulated vans. In addition, the Department operates two insulated carrier boats, one from Cochin and the other from Azhikode. These boats transport iced-fish through the inland waters to the interior places. For the marketing of fish in the interior areas, the Indo-Norwegian Project operates eight refrigerated vans.

5.48 It is estimated that the State will require about 60 road vehicles and 20 carrier vessels during the next 10 years. The capital expenditure on these is expected to be about Rs. 40 lakhs, of which Rs. 15 lakhs would be required during the Third Plan. The trucks and carrier vessels should, as far as possible, be owned and operated by Fishermen's Cooperative Societies. Expansion of insulated wagon facilities on the railways will be equally necessary. Insulated wagons should be provided on routes connecting the major production centres with the consumption centres.

Marketing

5.49 The marketing of fish in Kerala is not well organized. At present it is controlled by a few moneylenders and fish merchants. The fishermen are very poor and have generally to depend on borrowings during the off season. A departmental survey reveals that in 1958 the fishermen in Kerala had total assets of only about Rs. 30 lakhs against a total debt of Rs. 135 lakhs. Only a small percentage of the fishermen in Kerala own the boats and nets they use. Most of them work as employees under few boat-owner fishermen. In the pay-off period the boat-owner advances small amounts to the fishermen for their day-to-day needs. The catch is auctioned at the landing centres. The bidders include the fish curers, the retailers and lorry owners, who generally supply fish to the retailers.

5.50 Fish prices fluctuate considerably even in the course of the day. Fish is never weighed in the market. They are measured by standards such as heap, basket, and number, and these vary from market to market. The important wholesale fish markets in the State are located at Trivandrum, Kottayam, Tonur, Trichur, Kozhikode, Alwaye, Changanacherry and Athirumpuzha.

5.51 Changanacherry, Athirumpuzha and Vaniyankulam are the most important markets for cured and salted fish. In the coastal areas the consumption of dried fish is confined mostly to the off-season when fishing totally stops. In the interior of the State, owing to lack of transport facilities, cured fish is sold for the major part of the year. The State has a number of retail fish markets, every town or a group of villages having at least one.

5.52 Fish marketing in Kerala requires a great deal of improvement, both

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the services, which have declined from Rs. 23.8 lakhs in 1956-57 to Rs. 17.4 lakhs in 1959-60.

8.24 The allotments during the Second Plan for the construction of roads and bridges were Rs. 2.146 crores and Rs. 1.932 crores respectively. The expenditure on roads and bridges in the first four years of the Plan amounted to Rs. 2.871 crores and Rs. 1.041 crores. The expenditure on maintenance in the three years 1956–59 was about Rs. 2.956 crores. The achievement in respect of road construction, improvement and upgrading and construction of major bridges lagged seriously behind targets in the fourth year of the Second Plan.

8.25 The Central Government's expenditure on the construction and improvement of national highways was as follows:

1958-59	Actual	Rs. 11 lakhs
1959-60	Revised Estimate	Rs. 32 lakhs
1960-61	Budget Estimate	Rs. 35 lakhs

8.26 The number of buses and trucks rose sharply in the State during the four years of the Second Plan; but particulars are lacking regarding the amount of public or private investment on vehicles. The nationalized passenger services planned to add 460 buses to the fleet, 300 for rehabilitation and new 160 for operating on a stretch of 400 miles of roads. If achieved, this would involve an investment of the order of Rs. 2 crores. Between 1956-57 and 1958-59 the capital at charge rose by Rs. 78.4 lakhs only.

THE INLAND WATERWAYS

8.27 The inland waterways of the State comprise: (*a*) the west coast canal system, stretching continuously except for a land-locked break between Azhikkal and Badagara (29.5 miles) a distance of over 347 miles from Trivandrum to Hosdurg; (*b*) cross canals, 387 miles long, mostly in the south of the State serving the commercial region in the midlands, and about 521 navigable miles in its various rivers. The Ashtamudi and Vembanad lakes provide extensive navigation facilities for traffic to and from Alleppey, Kottayam, Quilon and Cochin.

8.28 The waterways present a variety of problems though none of them are insuperable. These should be tackled systematically as the waterways promise superior economic advantages. Natural limitations arise from weather and rainfall; most rivers are navigable upto their middle reaches only during the period of the monsoons. In many places they are narrow and shallow (e.g., on the Trivandrum-Quilon route). Dredging is often insufficient and even the dredgers are unsuitable for dredging the narrow sections. Tugging services are required in hazardous areas, e.g., Pathiramanal-Munroe light area in the Vembanad lake. Bridges are often low, as in Varkala and on the Trivandrum-Quilon route, and they do not permit operation, particularly of passenger boats. Landing places have not been provided in many places, and where they are, they are not maintained in proper condition for use. A great drawback of water transport is insecurity and pilferage of the cargo. The

establishment of booking agencies and the introduction of insurance against loss or theft are crying needs of the water transport system of the State. Licensing rules have to be made uniform throughout the State; the levy of tolls at locks and toll stations in Malabar has to be abolished, the loss in revenue being made good by licence fees. The bulk transport of petroleum products, which is of the order of 72,000 tons annually, suffers from restrictions on licensing of tank-boats with wooden hulls. Since the traffic is likely to be doubled in 10 years the rules must be reviewed to see if they can be amended to suit local conditions, especially in the case of non-hazardous petroleum products. A considerable volume of traffic-potential is likely to be generated for the waterways by the proposed programme of industrialization. A proper organization answering to the anticipated demands for transportation by waterways is called for.

8.29 At present 25,030 country craft (registered tonnage 180,735), 466 motor-boats (registered tonnage 2,988) and 1,298 crafts are operating on Kerala's waterways. In spite of the shortcomings referred to above, about 2.3 million tons of goods are moved annually over the waterways. The approximate figures of tonnage between specific points are 1.35 million tons between Cochin and Quilon, 60,000 tons on the Trivandrum-Quilon route and about 990,000 tons in the area north of Cochin. Particulars of the growth of traffic in recent years are not available.[1]

8.30 Moter-boats carry about 27,700 passengers a day on 65 different routes, the length of journeys ranging from 6 to 77 miles. Of this traffic, about 15,000 passengers were carried daily by 146 powered boats operated by the Kerala Water Transport Corporation in the Cochin-Quilon area. The Corporation's fares were slightly higher than on the Valloms. The organization ran into difficulties and is being reorganized. The State ferry services, operated with 13 powered boats between Ernakulam and Cochin, have been incurring losses. But in view of the revised fares introduced recently, they are expected to work profitably in the future.

8.31 The inland waterways were allocated Rs. 43 lakhs in the Second Plan in order to (*a*) construct the Alleppey-Shertallai Canal (*b*) improve the West Coast Canal from Trivandrum to Shoranur (*c*) construct the Badagara-Azhikkal Canal (*d*) improve canals in the Malabar area, and (*e*) carry out some minor works. In the first three years Rs. 23 lakhs were spent. As most of the funds were taken up in the execution of the Alleppey-Shertallai Canal Scheme, much was not done for the other schemes. Top priority is being given for improvements to the Cochin-Quilon section. The estimated cost for the Azhikkal-Badagara canal is Rs. 1.05 crores. As the proposed alignment involved deep cutting at several places, a new alignment is being worked out for execution in the Third Plan.

THE PORTS

8.32 The coastal and foreign traffic of the State is handled at Cochin, Alleppey, Calicut and 10 other ports of the State. The major port of Cochin dominates all

[1] However, in section 8.42 the rate of growth of traffic anticipated during 1961—71 is indicated.

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transport activities of the State. About 240,000 tons of imports and 310,000 tons of exports of the State are handled, mostly in stream, and carried to and from the port by the inland waterway system. The role of the port and of the inland waterway system as a feeder in the transport activity of the State is likely to grow along the lines outlined in a later section.

8.33 Studies made by the Intermediate Ports Committee show that Neendakara which is six miles north of Cochin, can, if developed, serve the industries in the Quilon-Kundara area to the extent of an annual traffic of 400,000 tons comprising cashewnuts, ilmenite, etc. Koilthottam, at present handling the ore traffic, may stabilize its present traffic. Industrial developments around Calicut, such as the rayon pulp industry expected to come up at Mavur, may push the traffic at that port to over half a million tons by 1971.[1]

8.34 Several improvements were made at the Port of Cochin. With continuing increase in the import of oil, two tanker berths had to be constructed at a cost of Rs. 17.4 lakhs at Ernakulam channel to ensure safety and quicker turn-round. The pipe-line leading to the shore installations was commissioned in 1956. Three of the four additional wharf berths provided with crane, railway track, transit sheds, warehouses, open stacking space and other facilities at an estimated cost of Rs. 2.96 crores are almost ready.

8.35 Total expenditure on the development of minor ports of the State was expected to be Rs. 22.6 lakhs in the Second Plan.

8.36 Pending more detailed information regarding actual investment expenditure between 1956-57 and 1960-61, it may be estimated that the investment in the State in the Second Plan on transport–railways, roads, bridges, buses, inland waterways and ports, was about Rs. 11.14 crores. It appears that in the first four years of the Plan the actual expenditure was about Rs. 7.18 crores, i.e., about 64.5 per cent of the financial allocations had been spent. In the Third Plan period and in the Fourth, every effort must be made to fulfil as nearly as possible the physical and financial targets, as transport arrangements must be ready in advance to receive the anticipated volume of traffic without creating bottlenecks.

AIR TRAFFIC

8.37 The airports at Trivandrum and Cochin are served daily by a clockwise and an anti-clockwise service touching (*a*) Madras, Trichy, Madurai, Trivandrum, Cochin and (*b*) Coimbatore, Bangalore, Madras and Cochin. Cochin is also served by a daily service from Bombay *via* Belgaum. About 400 passengers travel every month by each of these services. About 350 passengers travel from Cochin to Belgaum and Bombay every month and 70 between Bombay and Trivandrum *via* Cochin or Bangalore. The prospects of this traffic are being studied at present by the National Council

[1] For particulars of a detailed assessment of traffic prospects at Calicut, Beypore vide *Report of Traffic Survey of Beypore*, NCAER, 1962.

31: Slater S-5 (1916-1917) 1918 AWI India
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245 eight miles from the village, but the primitive oil mill is chiefly used, worked by two oxen. It is very cheap. Perhaps two rupees would be enough excepting for the oxen.

438 *The village trade.*—The chief articles consumed are rice, fish, vegetables, cereals and spices. The price of the total quantity consumed in the village may be estimated at Rs. 2,50,000, the total sales of the shop being Rs. 3,50,000, of which one lakh is to outsiders.

The quantity of produce taken to the market is not very great. The rice and cereals and spices necessary for consumption come from Palghat and consequently must be bought from the bazaar All other articles that are necessary, e.g., vegetables, fish, salt, chillies, oil, straw, fodder, fuel, etc., are brought to the house by petty traders or by the actual producers. In addition to this there is a weekly fair where local produce to the value of about Rs. 1,000 is sold weekly. A smaller quantity, which may be estimated at Rs. 36,000 per annum, is sold to shopkeepers and they sell to other villages. The people sell to shopkeepers only when they cannot sell in any other way, for the shopkeepers offer only a low price.

491 The main road comes from the Cochin State and passes through the northern and the western side of the village and bends and passes through the southern side. One branch road runs from the west and passes through the centre and ends at the eastern extremity of the village. The road system is not satisfactory. Other branch roads are wanted and those that are made have not been repaired at all for many years, though tolls are collected. People once complained of this to the Taluk Board but to no effect, although thousands of pilgrims visit this place every year on account of the sanctity of the temple. There are numerous by-ways.

498 The nearest railway stations are Pattambi, Trichur, and Watakkancheri, each twenty miles away. People go to Trichur by
● 505 boat through the backwaters, and the steam boat that runs from Ponnāni to Tirur is availed of by many and it is cheap. There is backwater communication to Ponnāni and Cochin.

438 Copra, coir, etc., are taken or sent to Cochin and the people get in return rice, cloth, and cereals and other luxuries. Fish can be got from the sea, which is very near the village. The fishermen go every day in the morning and return in the evening.

465 *Economic condition of the village.*—Wages for artisans are always paid in money; for agricultural work both in kind and in money.

Money wages.—The ordinary labourers are always paid in money. In short all those kinds of labour which do not immediately bring fruit to the owner are paid in money. A labourer, for a full day's work, is now paid four annas; five or six years ago three annas. For short work such as carrying weights, etc., the wage is fixed for the moment and will vary according to the distance they have to go, etc. Generally two annas must be paid for one mile as an average. For carrying a bag of rice a high wage is demanded because of high weight.* Woman's labour costs three annas per day now, formerly 2½ annas, a boy's labour 2½ annas now, formerly 2 annas.

Carpenters get six annas a day, boy carpenters three annas, formerly four annas and two annas. Other artisans such as black-

* [160 lb.—Ed.]